



CORDELL BANK NATIONAL MARINE SANCTUARY SANCTUARY ADVISORY COUNCIL

MEETING MINUTES

August 20, 2015

9:15 AM

Point Reyes National Seashore, Red Barn Classroom, Point Reyes Station, CA

Note: The following meeting notes are an account of discussions at the meeting of the Sanctuary Advisory Council for Cordell Bank National Marine Sanctuary (CBNMS). The council is an advisory body to the sanctuary superintendent. The opinions and findings of this publication do not necessarily reflect the position of CBNMS and the National Oceanic and Atmospheric Administration (NOAA).

Call to Order/Roll Call/Welcome (George Clyde)

George Clyde, Advisory Council Chair, called the meeting to order at 9:31 AM and welcomed everyone. Lilli Ferguson, advisory council coordinator, then called roll. LTJG Steven Dross introduced himself; he is now the alternate for the United States Coast Guard (USCG) seat. George announced that Kevin Krick had changed jobs, and was called out of town. Kevin moved to Matson Navigation, per John Berge.

Members and Alternates Present:

George Clyde (Chair; Community-at-Large – Marin County)
Mike Cummings (Community-at-Large - Marin County Alt.)
Bill Wolpert (Community-at-Large – Sonoma County)
Lance Morgan (Conservation)
Todd Steiner (Conservation Alt.)
Leslie Adler-Ivanbrook (Education)
Rachel Bergren (Education Alt.)
Richard Ogg (Fishing)
Noah Wagner (Fishing Alt.)
John Berge (Maritime Activities Alt.)
Jaime Jahncke (Research)
Tessa Hill (Research Alt.)

Agency Representatives and Alternates Present:

Dayna Matthews, NOAA Fisheries
LTJG Steven Dross, U.S. Coast Guard (Alt.)

Members of the CBNMS staff were also present:

Dan Howard (Sanctuary Superintendent)
Michael Carver (Deputy Superintendent)
Lilli Ferguson (Resource Protection Specialist and advisory council coordinator)
Dani Lipski (Research Coordinator)

Review and Approve Agenda (George)

The agenda was reviewed and unanimously approved by the advisory council.

Review and Approve April Meeting Minutes (George)

The April 23, 2015 meeting minutes were reviewed and unanimously approved by the advisory council.

Sanctuary Superintendent's Report (Dan)

- Dan reported Dan Basta, the Office of National Marine Sanctuaries (ONMS) Director, is on administrative leave; reason unknown. The leave began at the end of May. John Armor is the Acting Director; Matt Brookhart is the Acting Deputy Director; under them, people have been shuffled to fill positions as needed. Dan had no idea how long this situation would go on.
- Dan and Greater Farallones National Marine Sanctuary (GFNMS) Superintendent, Maria Brown, recently spent a day with John Armor and Bill Douros touring the coastline adjacent to the expansion area and meeting with partners. John Armor and Bill also met with the two sanctuaries' staffs. John Armor said we are moving forward as a program and continuing to do what we do, planning for the upcoming budget.
- For the FY16 CBNMS budget, funding may be requested for an education specialist to help CBNMS Education and Outreach Coordinator, Jennifer Stock, with outreach, attending some meetings, working with schools in expansion area, and implementing outreach with GFNMS staff members. A contract was recently awarded to Kaitlin Graiff for CBNMS research work.
- An authorization regulation for CBNMS had been proposed in the draft environmental impact statement and proposed rule, but was taken out of the final documents in response to public comments. This would have allowed future projects that had a valid approval from another agency, but violated sanctuary regulations, to be allowed via an authorization by CBNMS. The GFNMS Advisory Council may have a working group examine this issue in the future, but the timing has not been set. The CBNMS Advisory Council plans to discuss the matter and if a working group would need to be formed once the GFNMS Advisory Council has acted upon the recommendations of its working group. Monterey Bay National Marine Sanctuary has had an authorization regulation since its designation in 1992, and this has not been problematic.
- Essential Fish Habitat (EFH) 5-year designation on the West Coast has been a topic under review for the past few years, and Dan and CBNMS Research Coordinator, Dani Lipski, recently met with Seth Atkinson from the Natural Resources Defense Council, which is part of a consortium working on EFH. Different proposals have been put forward. Dan said the CBNMS position is no changes to the current closures, and that data are not available to support additional no trawl zones. The Pacific Fishery Management Council (PFMC) considered all the proposals, and wanted all the groups to get together and come up with a coordinated proposal. NRDC and others are doing that, and Seth is meeting with bottom trawl fishermen from Washington to southern California to get input on: current closure zones, if they want access to any of those and if they want any areas closed that are open now. Dan would potentially consider opening up a small area of the no trawl zone on the east side of Cordell Bank, and has suggested the closed area be added to the bottom of the zone so the overall size remains the same. Regarding a proposal to open a portion of the no trawl zone southwest of Cordell Bank, CBNMS prefers to keep the closure. There are also areas proposed as new no bottom trawl areas, such as a hard bottom area between Cordell Bank and Bodega Canyon. The National Marine Fisheries Service (NMFS) did a remotely operated vehicle (ROV) survey there. There is also another area on the west side of Cordell Bank. PFMC will be discussing EFH on September 15. Embroiled in this are the rockfish conservation areas (RCAs); several fish stocks have been rebuilt since RCAs were designated. A draft proposal of a consortium of fishermen would to eliminate RCAs and

add some area to EFH areas; RCAs were formed to rebuild particular overfished species, not to protect habitat. Some feel that RCAs have helped the habitat to recover. Once the PFMC takes final action, an environmental impact statement will go forward with a preliminary preferred alternative.

- As Jenny was at a workshop, Dan highlighted some recent education and outreach activities. In June, with other partners, Jenny put on a workshop for 18 teachers about ocean and coastal ecology, focused on engaging teachers and getting them into the environment.
- The ocean center building at the Point Reyes lighthouse is under construction. The interior murals and models have been installed. Some more exhibit panels will be completed in the next few months, with CBNMS, GFNMS, ONMS and the National Park Service all working together.
- The annual field seminar had about 35 attendees who saw over 50 humpback whales, a leatherback sea turtle, albatrosses, and other seabirds.
- The CBNMS travelling photo exhibit is at the Marin Civic Center and all are invited to the reception August 25.
- The San Francisco International Ocean Film Festival will take place in March 2016; the advisory council was encouraged to let others know about it.

Advisory Council Business (Lilli)

Lilli reviewed the positions available in the current recruitment round for advisory council members and alternates: members and alternates for the Conservation, Community-at-Large-Sonoma, and Maritime Activities seats. The application materials are available on the website, and applications must be received by September 30, 2015.

CBNMS Research and Resource Protection Reports (Dani and Michael Carver)

- Research: Dani reviewed the activities of the field season so far. This is the second year of putting out moorings to monitor dissolved oxygen (DO). Last year there was an indication of low DO at Cordell Bank; this year they want to monitor for longer, and put it out in May, with plans to recover it in October. A television crew was along for the deployment, and as a result there was a story on hypoxia on KTVU.
- This is the 12th year of Applied California Current Ecosystem Studies (ACCESS) surveys; they visit the lines three times a year and do oceanographic water sampling, prey availability, and observations for marine mammals and seabirds. They also collect information on marine debris and crab pots, including out of season crab pots. This year, a person with the SeaDoc Society secured a permit to pull out of season crab pots from the sanctuary and ACCESS data are supporting the work. Two of the three cruises have been completed this year and the third one will be in September. CBNMS Advisory Council members interested in going on the cruise should let her know. The June cruise was during an upwelling event, low temperatures, gelatinous zooplankton, some small krill, whale sightings, foraging seabirds, and nearshore phytoplankton blooms. There was some rough weather, so most of the line over Cordell Bank was not completed. The July cruise saw warmer water, gelatinous zooplankton, more small krill, hundreds of whales (many in the northern area), common murrelets with chicks, and storm-petrels. She mentioned some of the ocean conditions in the region, including warmer water at the sea surface and harmful algal blooms.
- CBNMS has a new partnership with the NOAA Pacific Marine Environmental Laboratory (PMEL); a passive acoustic listening buoy is planned to be deployed in CBNMS this fall. This was in response to advice from the advisory council joint working group and was made possible

by a grant from the International Fund for Animal Welfare. PMEL is implementing a NOAA noise information network and sanctuaries are good places for collecting baseline data. The data will not be real time; the buoy will be deployed southwest of Cordell Bank for two years, then it will be retrieved and data downloaded. The data will provide a sanctuary soundscape summarizing ambient noise in the ocean, which may be compared to other areas in the network. The area for the buoy deployment was chosen to be in deep water and away from fishing (in a no trawl zone).

- There were no ROV surveys in CBNMS this year, but the data from last year are being worked up, to provide data summaries and reports. A product from the ROV video imagery from last year was created by a California State University Council on Ocean Affairs, Science and Technology intern, James Seward. After organizing and cataloguing the video imagery, he created an interactive web tool called a story map to tell a story about CBNMS ROV research. This should be available on the website soon.

- Members of the Bay Area Underwater Explorers (BAUE), who have worked with the CBNMS staff in the past, are doing some work again this fall. Some of their photographs are in the CBNMS photo exhibit.

- Resource Protection: Resource Protection Coordinator, Michael Carver, highlighted recent resource protection activities. Several permits were issued, some in cooperation with other sanctuaries, and Lilli and Dani assisted on several of them. Permits were issued to people from NMFS, the Coastal Data Information Program (CDIP), the NOAA National Data Buoy Center, and the SeaDoc Society. One to a person from BAUE is in process. Conditions to best protect the resources may be included in permits.

- The ONMS engaged in consultation with NMFS about delisting of humpback whales under the Endangered Species Act. NMFS proposes to split the populations, and ONMS asked them to consider various things as part of the rule being considered, including working collaboratively with the sanctuaries' staffs when designating whale habitat in sanctuaries.

- The USCG issued a voluntary seasonal vessel speed request for commercial traffic to go 10 knots in the Traffic Separation Scheme (TSS). The announcements are made on the radio several times per day. There were meetings with others as well, including Port of Oakland employees. There have been large numbers of whales at different times this year. Automatic Identification System (AIS) data from 2008 - 2014 is being analyzed several ways by the CBNMS staff, in collaboration with NMFS, looking at things like ship speed, whale populations, and whale behavior. The NMFS Protected Resources Division is looking at how many boats are complying with the voluntary requests to slow down.

- A letter of interest has been submitted to the National Centers for Coastal Ocean Science for socioeconomic work to examine costs of vessel speed reduction.

- Michael has been collaborating with the sanctuaries' maritime heritage staff on investigations of shipwrecks in GFNMS and will help with that again; he may also help Channel Islands National Marine Sanctuary this year with shipwreck investigations.

- CBNMS is drafting an incident response plan for staff use during emergencies. Likely the staff would work with the GFNMS staff on large spills.

- The group was thanked for reporting what they see on the water. A case is being prosecuted.

- The CBNMS staff is trying to lead by example in the office with things like recycling, solar panels, composting, getting a hybrid car, etc. and doing what it can do reduce use of resources or recycle at events like the celebration of the expansion of CBNMS and GFNMS.

- Lilli reviewed the status of the six-month exemption for the USCG from the discharge prohibitions in the CBNMS and GFNMS expansion areas, and said conversations have been underway with the USCG to obtain information about their discharge activities. Once there is a proposed action, public and advisory council input can be given.

Public Comment

There was none.

With agreement of the advisory council, George moved the NOAA Law Enforcement Report, to occur at the next item in the agenda.

NOAA Law Enforcement Report (Dayna Matthews)

- The PFMC briefing book for the September meeting has been posted to their website.
- NMFS had been attempting to hire enforcement officers in California. Five positions have been advertised. An officer in Santa Rosa took a promotion and moved to Hawaii. He may be able to announce a newly hired supervisor soon.
- Over last 14 months there has been an acting director in the Office of Law Enforcement. A new director, Jim Landon, will be in place the Monday following the advisory council meeting. He had been the head of General Counsel for the enforcement section, the head of prosecutions of violations under the Magnuson Stevens Act.
- Violations are posted on the NOAA General Counsel website in quarterly reports. He had no CBNMS regulations violations to report at this meeting.

Anticipated Trends in Ocean Shipping in the Next 5-10 Years (John McLaurin)

- John Berge introduced John McLaurin, President of the Pacific Merchant Shipping Association (PMSA). John has worked for him for 15 years. PMSA has offices in Long Beach, Oakland and Seattle. PMSA's primary focus is container ship and terminal operations. He talks to elected officials as part of his job. Some highlights of trends in the industry follow.
- Governor Brown issued an Executive Order; he is trying to gather a group to work on a sustainable freight strategy, including land facilities, trucking, etc. There are different elements going on the state level on this; this sector is very important to the economy.
- Container ship rates are low, back to 1990 or 1980s levels; there has been "rate erosion." Companies are working on reducing costs. Ships are getting larger and they are being operated slower, to save fuel and costs. More time needed to ship goods lengthens the supply chain.
- During the recession, ships were cheap to build, and created jobs in other countries. Some of these ships were then idled due to no need for the capacity, and the industry never really recovered from that. Ocean carriers are entering into alliances and sharing ship assets, which helps them benefit from economies of scales, and reduce costs.
- We may see fewer port calls in the future, as ships get bigger. There will be winners and losers in the port community, which is very competitive. Other states want to take business away from California ports, and ports are trying to access federal funds for improvements. The Port of Oakland has funding concerns. It has a 50 foot draft limit, and fairly small terminals compared to the Ports of Los Angeles and Long Beach, as well as a smaller population base.
- Panama Canal expansion is taking place and is targeted to be done spring of next year. The Suez Canal has expanded, which is a reflection of a changing manufacturing base to other countries; the expansion allows ships to pass each other and facilitates getting goods to the U.S.

East coast. Some companies have already taken delivery of ships that cannot get through the Panama Canal, and there is talk of expanding the canal more.

- Some longshore workers will see a change in their jobs, to being more skilled, safer and more comfortable. There will be a need for mechanics. Some longshore jobs may go away.

- There is no national or state policy covering port funding or a single entity overseeing ports. California ports do not levy taxes; money comes from lease revenue. Most of the funding for infrastructure is for outside of port boundaries, such as roads, railroads etc.

- With larger ships have come a reduction in traffic; traffic is tracked by the marine exchanges.

- Regarding tankers, the oil market almost upside down, and there is a glut of oil out there.

Tankers in the Alaska trade are further offshore than other shipping, as has been the case since the Exxon Valdez accident. Full speed for a tanker is maybe 13 knots. Unless the export of oil is allowed, he did not foresee much change.

- Noise from new ships may be quieter; there are efforts at the International Maritime Organization (IMO) to establish quieter standards for ship noise. With new ships, the propeller cavitation would change.

Sanctuaries' Progress in Addressing Ship Strikes of Whales Issue (Dan, Michael, and John)

- Dan related that previously, a joint Working Group of the GFNMS and CBNMS advisory councils worked on the issue, and made recommendations to the advisory councils. The advisory councils adopted the recommendations, which were provided to the sanctuary superintendents.

- One recommendation, use of dynamic management areas (DMAs), was asking shipping traffic to slow down voluntarily to 10 knots or less in a single lane or consider using an alternate lane when high numbers of whales were in or adjacent to a lane. The sanctuary staffs, with their partners, tried using DMAs in 2014; it became apparent that resources were not available to collect whale distribution and abundance data throughout whale season to cover the geographic range of the three traffic lanes to support recommendations. It is important to know where the whales are and where they are not present. There might be knowledge of whales in one lane but no knowledge of whale abundance in the other two lanes. In 2015, a decision was made to have a voluntary vessel speed reduction from May 15 – Nov. 15. This is typically the season when humpback and blue whales migrate to the sanctuaries to feed.

- Some members of the former working group felt that their recommendations had been abandoned. Maria had reported to the GFNMS Advisory Council in May on the progress that had been made in response to the report recommendations. The staffs are still working to address the recommendations and have not abandoned work to reduce the risk of ships hitting whales.

- Michael reported on actions taken in response to the recommendations [a report summarizing actions was emailed to the advisory council 8/6/15], and mentioned the many groups and people that have done work to address the recommendations in the report. Some examples provided included:

- The San Francisco TSS was modified June 1, 2013 in an effort to reduce ship strikes of whales. ONMS continues to promote studies and collaborations to assess the conservation benefit of the lane changes. If data in the future supported more changes, the possibility of more modifications could be considered. Data from ACCESS, the Cascadia Research Collective, satellite tagging, AIS and more are providing a more quantified understanding of the patterns of ships and whales within the sanctuary and their probability of co-occurrence.

- Work to produce better predictions continues.

- A real-time whale sighting network has been established, and the tools Whale Alert and Spotter Pro have supported reporting the sightings. The sightings are depicted on a map viewer created by Point Blue Conservation Science.
 - A team of experts was assembled to consider current whale sightings, locations, behaviors, and seasonal trends to help inform dynamic management. As noted, DMAs were tried in 2014, but it was apparent much more data were needed to make this more effective. They had some spotter data, but the crowd sourcing of data was not robust enough to support decisions.
 - In 2015, sanctuary staff members worked on a consistent slowdown of shipping traffic, or Voluntary Speed Reduction (VSR), outside of San Francisco Bay for the season whales are known to be in the area, to try to reduce occurrence and lethality of ship striking whales. Dan and Maria signed a letter which went out to a number of west coast shipping and port contacts. Analysis of AIS data from 2014 and 2015 shows the average speed of all vessels during the VSR and indicates low voluntary compliance with the VSR request.
 - On the recommendation to consult with other agencies on vessel traffic and noise, the staff has consulted with the Navy on sonar use, with NMFS on a proposal to delist humpback whales as an endangered species. The CBNMS research coordinator is part of a national ONMS team evaluating sound in sanctuaries. With outside funding, this has led to CBNMS working with other NOAA partners and Oregon State University to fabricate a mooring with equipment to measure sound in the ocean. This is part of a national effort to measure sound in the ocean. The buoy will be deployed in CBNMS in fall 2015.
 - On port-based incentives, the staff has not been in a position to pursue it in this area. A trial financial incentive was put in place in Channel Islands National Marine Sanctuary, and some global companies were willing to show their ships down. The southern California Air Quality Districts have been providing some support for the trial incentive and reducing emissions at the Ports of Los Angeles and Long Beach, with the goal of improving air quality.
 - A great deal of outreach effort has gone into letting groups and the public know about some of these initiatives to reduce ship strikes of whales, including presentations at meetings, notices to mariners, brochures, updates to the advisory councils, information on Point Blue and other websites, and more. The word about progress made to date on the recommendations still needs to get out even more broadly, though.
- It was noted the letter to the superintendents expressing concern that sanctuaries were abandoning the working group recommendations did not represent the whole working group. Also, the working group knew that every recommendation couldn't just happen, because a lot of funding, cooperation from the industry, etc. would be needed.
- John Berge, who had been a member of the joint working group, provided more context about industry incentives to slow down and about former working group members concerns. Saving money by using less fuel when slowing down is one incentive. Also, no one wants to hit a whale. The schedule for implementing the recommendations was ambitious and there were some hurdles to overcome. At the same time, signatories of the letter still strongly support the original recommendations and want the sanctuaries to appropriate the resources to keep work on them moving as best possible. He expressed appreciation for all the work done to date. There was not total consensus in the group about vessel speed reduction. As an example, for blue whales, it might increase the potential of a strike. The DMAs were designed to reduce the co-occurrence

of ships and whales, and the speed of 10 knots was to provide incentive to take ships to another traffic lane. Just reducing speed would be a different strategy.

- In further discussion, it was acknowledged the letter signatories' concern about the DMAs may have been partly due to lack of communication by staff to those in the former working group regarding progress to follow up on the recommendations.
- This issue came up somewhat at the last minute before the May GFNMS Advisory Council meeting. Some people wanted the DMAs instituted again, while some felt the data was not there to do this well.
- By discussing this at today's meeting, George said he, as Chair, could appoint one or two people from the CBNMS Advisory Council in the future to participate in a joint working group, if one were formed. The next meeting of the GFNMS Advisory Council will be after the next meeting of the CBNMS Advisory Council.
- Other points were brought up for consideration. Often times, whales are not in the TSS; they often concentrate along the shelf break, and the traffic fans out after leaving the northern lane [so whales may still be at risk]. One option could be to change the lane again, but that could take many years and would depend upon the politics of the agencies and organizations involved as well as having scientific justification. Going back into having an advisory council working group could take a lot of time. Perhaps instead of trying to get perfect data, the shipping industry could be offered incentives that made sense to them. This could include recognizing those who slow down or highlighting companies that do not comply with the VSR.

CDIP Funding of Buoy in CBNMS (Michael)

- The CDIP Program collects wave data via buoys along the coast of California; one of the buoy stations is in CBNMS. One use for the data is to ground truth the NOAA satellite data for the area, helpful for weather predictions. Recently, part of the CDIP funding has come from California State Parks, which cut funding for the buoys in half. The CDIP coordinator has said some buoys will have to be taken out of the system, including the one in CBNMS [already out of the water as of June 2015]. Michael wrote a letter for CBNMS to State Parks, supporting funding CDIP and keeping the CBNMS buoy in the program.
- There was discussion about what other outreach might be helpful on this issue, such as to the surfer community. California State Parks' concern seems to be about how recreational fishermen could be impacted.
- George said he supported Michael's efforts to have state parks fund the CBNMS buoy. Michael added people could also write individual letters.
- George recommended the advisory council approve him to write a letter to continue funding these buoys; Bill Wolpert moved this, and Jaime Jahncke seconded it.
- Discussion: George said he would circulate the letter. The CDIP program is run by a principal investigator at Scripps; different groups besides CDIP personnel service different buoys in the program (Hopkins, Army Corps of Engineers). ONMS does not receive any funding for the buoy in CBNMS. The issue of CDIP funding has been mentioned other places as well, including at the Harbor Safety Committee.
- There was no public comment on this issue.
- The motion passed with unanimous approval by the advisory council.

Cordell Marine Sanctuary Foundation (CMSF) Update (Dan)

- Foundation President, Tom Lambert, is stepping down at the October 6, 2015 board meeting.
- There is a new board member. He has been leading trips to Cordell Bank for years.
- The Foundation had a table at the national marine sanctuaries celebration event. An estimated 250 – 300 people attended the event.
- CMSF has offered to partially fund a table top exhibit, for use by both CMSF and CBNMS. Jenny has been talking to the artist who did the Oakland Museum of California about the possibility of doing the art for such an exhibit.
- Possibly the advisory council may come to the October 6 CMSF meeting, and the CMSF board could be invited to the advisory council retreat; Dan agreed.

Members' and Alternates' Reports (advisory council)

George reminded the advisory council that this section of the meetings was to report on what council members and alternates and their represented constituencies are doing/what they have learned from other [i.e. other fishermen, educators, people in the shipping industry, etc.) Also, a role is for advisory council members and alternates to be in contact with their represented constituencies about what the advisory council is doing and hearing. He noted the retreat is October 15.

John: While not a direct impact on CBNMS, he noted earlier on, up to 15-20 ships had been drifting/slow steaming off the coast waiting for berths for hours, off the 100 fathom mark. Now there is only one. The labor contract was resolved, though addressing a labor shortage continues.

Leslie Adler-Ivanbrook said she is no longer working at Hog Island Oyster Company and has been taking time off.

Richard Ogg noted it had been a poor salmon season and that fishermen transferred their interest to other fisheries, one of them being black cod. He said there was a meeting in Oakland this same day regarding whale entanglement. There is an implication that crab gear placed throughout coastal waters endangers whales, and the issue is a big concern to anyone with set gear. He hoped the issue could be resolved, perhaps by fishermen dissipating gear up and down the coast instead of concentrating it, but District 10 opens two weeks earlier than anywhere else, so everyone comes to the area. Another idea could be open season on same day coast-wide so people fish in their areas. In the early part of the season, crabs are offshore in deeper waters, and as the season progresses, they move inshore. He said whales normally did not come in close, in the 10-12 fathom range.

LTJG Dross said District personnel had been working on the discharge issue mentioned earlier. He will share relevant information with the advisory council once available.

Brian Johnson reported GFNMS had been reaching out to folks with pre-existing activities that could be in violation of sanctuary regulations regarding if they wanted to request their activity be certified by GFNMS, and some letters have gone out. There is a 90-day window to make this request for activities in the GFNMS expansion area. Anyone who had such an activity could get in touch with Max Delaney. GFNMS is working on getting moorings in Tomales Bay moved to areas with no eelgrass beds, or removed, with the remaining mooring permitted. The joint

GFNMS Advisory Council meeting with the Monterey Bay National Marine Sanctuary (MBNMS) Advisory Council August 19 focused on the MBNMS Management Plan review, and upcoming scoping meetings. He also encouraged folks who know Zeke Grader to visit him, as he is ill.

Todd Steiner said Turtle Island Restoration Network (TIRN) had received NOAA Bay Watershed Education and Training funds. They do a professional teacher training; Jenny will be teaching one of the classes, and she was helpful with the proposal. This time it will be over summer and fall. They are especially seeking teachers in low income communities. Teachers have the opportunity to bring students out to work in the watershed. TIRN is having an author event at the Dance Palace; one of the authors wrote *Blue Mind*. TIRN has two positions open, for a science director and a policy analyst.

Noah Wagner noted there had been a lot of talk on the dock about the lack of salmon, as well as about the whale entanglement issue. This year, a lot of squid is being unloaded at the Spud Point Marina. He recently saw a large sunfish in Bodega Bay and a family of otters crossing the road, neither of which he had seen in the area before.

Bill said half of the Turning Basin in the Petaluma River was filled with silt; the Army Corps of Engineers is responsible for dredging it. There has been a funding shortfall, and he wanted to be sure it was dredged fairly soon as it might flood in the winter. He announced he was reappointed for another term on the City of Petaluma Planning Commission. For Sarah Hameed, he reported that Bodega Marine Laboratory hoped some information on CBNMS work could be included on the flat screen televisions that provide information to visitors; people with ideas may contact Gabriel Ng gng@ucdavis.edu. The Center for Outdoor Opportunities and Learning project, part of the Regional Parks' Gateway Plan, is moving forward for Bodega Bay; some portions are completed or slated for construction; more information may be found in Sonoma County's proposed revised draft of Local Coastal Plan.

Tessa Hill announced there would be a free symposium September 10 on salmon and climate variability at the University of California, Davis. There will be a focus on research, with an eye toward management of the salmon population. She also said there was interest in how local communities are responding to climate change as a threat. She can bring any input back to the researchers.

Rachel Bergren reported that The Marine Mammal Center (TMMC) had treated 1500 animals so far this year, nearly twice as many as normal. They have seen evidence of pseudo-nitzschia, pre-maternal separation, malnutrition, and starvation. The rehabilitation rate this year has not been great, and this year's pups are also not looking good. She said she communicates advisory council matters to the TMMC's volunteers. The biennial conference of the Society for Marine Mammalogy will be in San Francisco this December and TMMC is cohosting it.

Jaime reported they got highest recorded mean sea temperature for July at the Farallones since they have been working there. This year that has been average to slightly above average breeding success for birds. Cassin's Auklets have been breeding twice from 2010 – 2014; last year they had to abandon the second brood and this year they did not try. There are a large

number of northern fur seals on the island and they have seen pups since mid July. Recently, the new Director of the Central and Northern California Ocean Observing System (CeNCOOS) said some funding for ACCESS was added to their base budget packet, submitted annually. A study using acoustic data for forage fish and data on fish consumed by birds has led to a forage fish biomass estimate for two types of prey.

Lance Morgan said the Marine Conservation Institute has entered into an Esri partnership on frameworks for geographic information systems (GIS) for the ocean. There will be a user meeting in Redlands in November. This came out of their work together on the marine protected areas atlas. Boyan Slat of The Ocean Cleanup is passing through the Bay Area and some local groups are meeting him and learning about his project. He has raised a couple million dollars on Kickstarter to clean the ocean.

George adjourned the meeting at 3:08 PM.